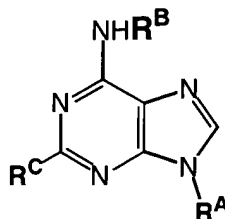


## Listing of Claims

1 - 21. (cancelled)

- 5 22. (currently amended) A compound of formula (Ia) (or a salt or ester, or salt of an ester, thereof):



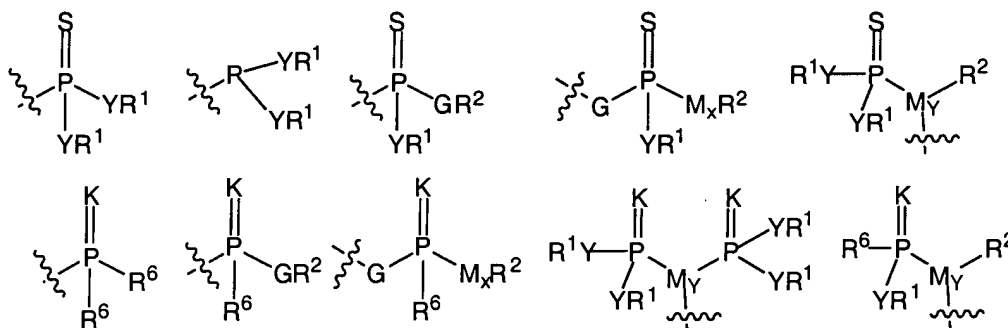
(Ia)

wherein

- 10  $R^A$  is  $M_x$ -aryl or  $M_x$ -heterocycle where M is a substituted or unsubstituted methylene, x is an integer from 1 to 6, the aryl moiety may bear one or more substituents, and the heterocycle is a substituted or unsubstituted, aromatic or nonaromatic heterocyclic moiety comprising a 5- to 7-membered ring bearing one or more heteroatoms;

$R^B$  comprises an aryl, or heteroaryl moiety bearing at least one a substituent of Series IIb:

15



IIb

- 20  $R^C$  is hydrogen, halogen, an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or -ZR, wherein Z is -O-, -S-, or NR, wherein each occurrence of R without a further alphanumeric superscript is independently hydrogen, or a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

each occurrence of K is independently -O- or -S-;

25

each occurrence of Y is independently -O-, -S-, -NR- or a chemical bond linking  $R^1$  to P;

each occurrence of R (without a further alphanumeric superscript) is independently hydrogen, or a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

5 each occurrence of  $R^1$  is independently a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or, except in  $YR^1$  moieties in which Y is a covalent bond,  $R^1$  may also be H;

each occurrence of  $R^2$  is independently  $R^1$ ,  $-PK(YR^1)(YR^1)$ ,  $-SO_2(YR^1)$  or  $-C(O)(YR^1)$

10 each occurrence of  $R^6$  independently represents an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

each occurrence of G is independently -O-, -S-, -NR- or  $M_x$ ; and,

15 each occurrence of  $M_y$  is independently a methine group or a lower alkyl moiety which contains a methine group and optionally may be further substituted.

wherein in each of the foregoing groups each aliphatic or heteroaliphatic moiety may be branched or unbranched, cyclic or acyclic and substituted or unsubstituted, and each aryl and  
20 heteroaryl moiety may be substituted or unsubstituted.

23. (previously presented) The compound of claim 22 wherein  $M_x$  is methylene, ethylene or propylene, and the aryl moiety is o-, m-, or p-hydroxy-, 2,3-dihydroxy-, 2,4-dihydroxy-, 2,5-  
25 dihydroxy-, 3,4-dihydroxy-, or 3,5-dihydroxyphenyl.

24. (previously presented) The compound of claim 22, wherein  $R^C$  is -OR, where R is H, aliphatic, heteroaliphatic, aryl, or heteroaryl .

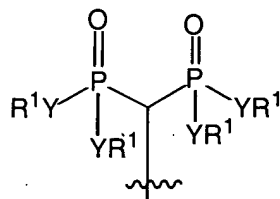
30 25. (currently amended) The compound of claim 22, wherein  $R^C$  is -R, -NRR or -OR in which each R is C1-C8 aliphatic, which may be branched or unbranched, cyclic or noncyclic, and which may be substituted with one or more hydroxy, alkoxy, aralkoxy, carbamyl, amino, substituted amino, ~~acyl~~, cyano, halogen, nitro or sulfo groups, and/or with one or more alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclic, aryloxy or aralkyl moieties which may themselves be  
35 substituted with one or more hydroxy, alkoxy, aralkoxy, carbamyl, amino, substituted amino, ~~acyl~~, cyano, halogen, nitro or sulfo groups.

26. (previously presented) The compound of claim 25, wherein each said R comprises a C1-C8 aliphatic moiety substituted with one or more groups selected from the following: a substituted or unsubstituted amine or 5- to 7-membered heterocyclic moiety, which may itself be optionally substituted.

27. (cancelled)

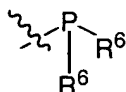
28. (cancelled)

29. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which R<sup>B</sup> comprises



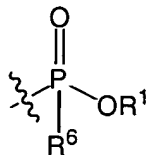
wherein each R<sup>1</sup> is independently H, alkyl, arylalkyl, or aryl.

30. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which R<sup>B</sup> comprises



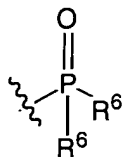
wherein each R<sup>6</sup> is independently alkyl, arylalkyl, or aryl.

31. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which R<sup>B</sup> comprises



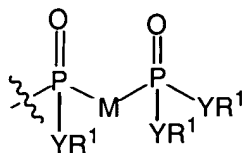
wherein R<sup>1</sup> is H, alkyl, or arylalkyl and R<sup>6</sup> is aliphatic, heteroaliphatic, aryl, or heteroaryl.

32. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which R<sup>B</sup> comprises



wherein each  $R^6$  is independently aliphatic, heteroaliphatic, aryl, or heteroaryl.

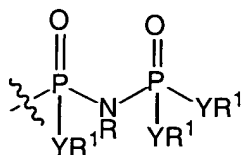
- 5 33. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which  $R^B$  comprises



wherein each  $R^1$  is H, alkyl, or arylalkyl.

10

34. (previously presented) The compound of any of claims 22, 23, 24, 25, 26, 47 or 48 in which  $R^B$  comprises



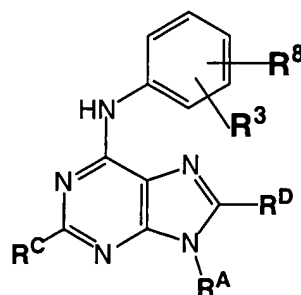
wherein each  $R^1$  is independently H, H, alkyl, arylalkyl, or aryl and R is aliphatic, heteroaliphatic, aryl, or heteroaryl.

15

35. (cancelled)

36. (currently amended)  
 ester, thereof):

A compound of formula (Ib) (or a salt or ester, or salt of an



(Ib)

wherein

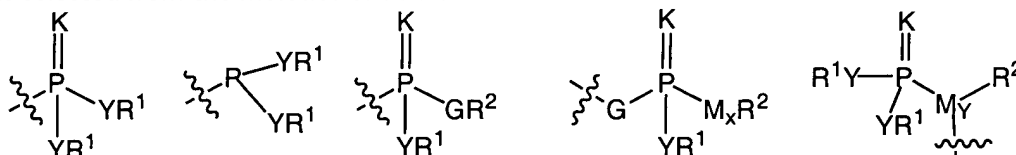
$R^A$  is hydrogen, or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

$R^C$  is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

$R^D$  is hydrogen, halogen, an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or  $-ZR$ ;

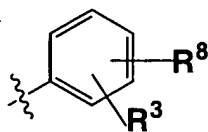
wherein Z is  $-O-$ ,  $-S-$ , or  $NR$ , wherein each occurrence of R without a further alphanumeric superscript is independently hydrogen, or a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

$R^8$  is selected from the moieties of Series II:

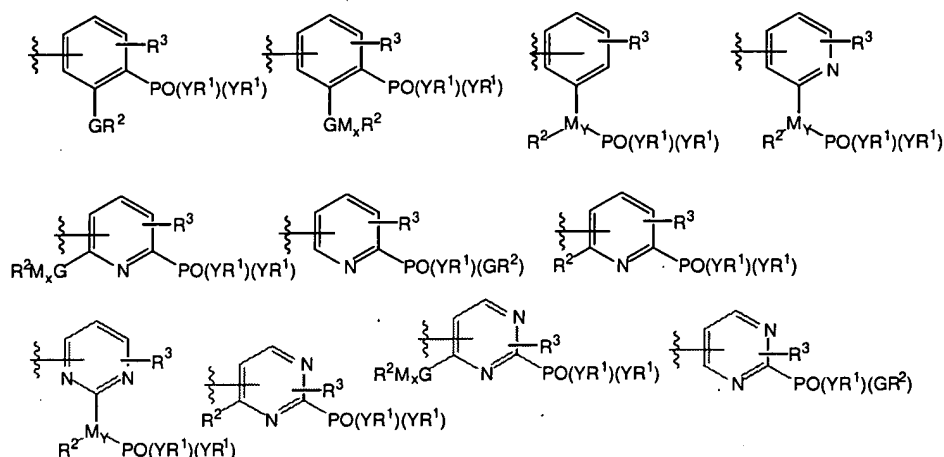


II

or



is selected from the moieties of Series III:



III

$R^3$  represents from 0-3 substituents independently selected from the group consisting of halogen, ~~R~~,  $-GR$ ,  $-CO(YR)$ , ~~acylamino~~, amido, amidino, cyano, nitro, azido, ~~sulfonyl~~, ~~sulfoxide~~, sulfate, ~~sulfonate~~, sulfamoyl, sulfonamido, and substituents of Series II;

M is a substituted or unsubstituted methylene; x is an integer from 1 to 6;

each occurrence of K is independently -O- or -S-;

each occurrence of Y is independently -O-, -S-,  $-NR-$  or a chemical bond;

each occurrence of  $R^1$  is independently a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or, except in  $YR^1$  moieties in which Y is a covalent bond,  $R^1$  may also be H;

each occurrence of  $R^2$  is independently  $R^1$ ,  $-PK(YR^1)(YR^1)$ ,  $-SO_2(YR^1)$  or  $-C(O)(YR^1)$

each occurrence of G is independently -O-, -S-,  $-NR-$  or  $M_x$ ; and,

each occurrence of  $M_y$  is independently a methine group or a lower alkyl moiety which contains a methine group and optionally may be further substituted;

wherein in each of the foregoing groups each aliphatic or heteroaliphatic moiety may be branched or unbranched, cyclic or acyclic and substituted or unsubstituted, and each aryl and heteroaryl moiety may be substituted or unsubstituted;

5 with the following provisos:

(1)  $R^D$  is a moiety other than one comprising a substituted or unsubstituted arylene moiety (in which up to two methine carbons may be replaced by nitrogen atoms), a C3-7 cycloalkylene moiety (which may contain nitrogen atoms in place of up to two ring carbons), an indanylene moiety, or a 1,2,3,4-tetrahydronaphthylene moiety;

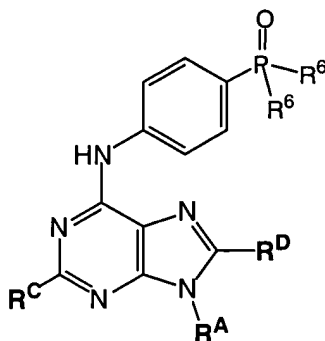
(2)  $R^D$  is a moiety other than one bearing a cyano group or ~~an~~ an N-substituted or unsubstituted amino, amidiño, guanidino or guanidinoalkyl group;

15  $R^C$  is covalently attached through a C-C bond to the carbon atom at ring position 2 of the purine ring system.

37 and 38. (cancelled)

20

39. (previously presented) The compound (or a salt or ester, or salt of an ester, thereof) of the formula :



wherein

25  $R^A$  is hydrogen, or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

$R^C$  is hydrogen, halogen, an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or -ZR, wherein Z is -O-, -S-, or NR, wherein each occurrence of R without a further alphanumeric superscript is independently hydrogen, or a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

$R^D$  is hydrogen, halogen, an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, or -ZR, with the proviso that  $R^D$  does not bear a cyano group or ~~is~~ an N-substituted or unsubstituted amino, amidino, guanidino or guanidinoalkyl group;

each  $R^6$  is independently aliphatic, heteroaliphatic, aryl, or heteroaryl and  
5 wherein in each of the foregoing groups each aliphatic or heteroaliphatic moiety may be branched or unbranched, cyclic or acyclic and substituted or unsubstituted, and each aryl and heteroaryl moiety may be substituted or unsubstituted.

40. (previously presented) A composition containing a compound of any of claims ~~1 to 39~~ 22,  
10 23, 24, 25, 26, 29, 30, 31, 32, 33, 34, 36, 39, 47, 48, 49, 50 or 51, and one or more pharmaceutically acceptable excipients or additives.

41 - 46. (cancelled)

15 47. (currently amended) The compound of claim 23, wherein  $R^C$  is -R, -NRR or -OR in which each R is C1-C8 aliphatic, which may be branched or unbranched, cyclic or noncyclic, and which may be substituted with one or more hydroxy, alkoxy, aralkoxy, carbamyl, amino, substituted amino, ~~acyl~~, cyano, halogen, nitro or sulfo groups, and/or with one or more alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclic, aryloxy or aralkyl moieties which may themselves be  
20 substituted with one or more hydroxy, alkoxy, aralkoxy, carbamyl, amino, substituted amino, ~~acyl~~, cyano, halogen, nitro or sulfo groups.

48. (previously presented) The compound of claim 47, wherein each said R comprises a C1-C8 aliphatic moiety substituted with one or more groups selected from the following: a  
25 substituted or unsubstituted amine or 5- to 7-membered heterocyclic moiety, which may itself be optionally substituted.

49. (currently amended) The compound of ~~any of claims 22, 23, 24, 25, 26, 47 or 48~~ claim  
30 39 in which  $R^D$  is H or halo.

50 (previously presented). The compound of claim 39 wherein  $R^C$  is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety which is covalently attached through a carbon-carbon bond to the carbon atom at ring position 2 of the purine ring system.

35 51 (previously presented). The compound of claim 50 in which  $R^D$  is H.



52 (previously presented). The compound of claim 51 in which R<sup>D</sup> is F.